

**ARIZONA GAME AND FISH DEPARTMENT  
HERITAGE DATA MANAGEMENT SYSTEM**

**Invertebrate Abstract**

**Element Code:** IILEPJ9170

**Data Sensitivity:** No

**CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE**

**NAME:** *Chlosyne acastus*  
**COMMON NAME:** Acastus Checkerspot, Southwestern Pearly Checkerspot, Sagebrush Checkerspot  
**SYNONYMS:** *Melitaea acastus* Edwards, *Charidryas acastus*  
**FAMILY:** Nymphalidae

**AUTHOR, PLACE OF PUBLICATION:** W.H. Edwards, Trans. Amer. Ent. Soc. 5: 16. 1874.

**TYPE LOCALITY:**

**TYPE SPECIMEN:**

**TAXONOMIC UNIQUENESS:** Some researchers consider *Chlosyne acastus* to really be a complex comprised of several species or subspecies. Others, including Scott (1986, p. 306), consider the Acastus checkerspot to be a subspecies called *Chlosyne acastus* ssp. *neumoegeni*. For now the Miller and Brown Checklist is being followed in the absence of persuasive evidence to the contrary. The old genus name *Charidryas* is still used by some.

**DESCRIPTION:** This Checkerspot is 1.25 – 2.0 in. (3.2-5.1 cm) in size. The male is pale orange above with fine to heavy black lines. The female is deeper orange but some females are yellowish or blackish. Below, they are a pale mottled orange and no forewing with marginal white crescents. The hind wing has narrow orange sub marginal bands and broad cream-white bands of black-rimmed white spots (sub marginal orange band may be vague orange circles on cream-colored background). The caterpillars are black with cream-colored dots, stripes of orange crescents and many spines.

**AIDS TO IDENTIFICATION:**

**ILLUSTRATIONS:** Color photo (West in [www.enature.com/field/guide/showSpeciesSH.asp?curGroupID=2&shapeID=975&curPageNum=2&recnum=BU0355](http://www.enature.com/field/guide/showSpeciesSH.asp?curGroupID=2&shapeID=975&curPageNum=2&recnum=BU0355)).

Color photo (West in <http://www.nearctica.com/butter/plate15/Cacast.htm>).

Color photo (Corel & Opler in <http://www.npwrc.usgs.gov/resource/distr/lepid/byflyusa/usa/149.htm>).

Color photo (Sommer in  
[http://imnh.isu.edu/digitalatlas/bio/insects/butrfly/famnymph/chac\\_d.jpg](http://imnh.isu.edu/digitalatlas/bio/insects/butrfly/famnymph/chac_d.jpg))

**TOTAL RANGE:** Washington east to North and South Dakota, and south to Arizona and New Mexico. Also found in Alberta and Saskatchewan Canada.

**RANGE WITHIN ARIZONA:** Arizona.

### **SPECIES BIOLOGY AND POPULATION TRENDS**

**BIOLOGY:** There may be 1 to 3 generations of caterpillars each summer, the last of which overwinters under rocks in a physiological state called diapause. Some caterpillars may remain in diapause for multiple seasons or years before emerging to continue feeding and to pupate. Adults generally fly from February through November.

**REPRODUCTION:** Several broods from May to September. The males perch and sometimes patrol in gulches for females. The eggs are laid in batches on the underside of host plant leaves and sometimes on flower buds. Third and fourth stage caterpillars hibernate under rocks. Some may diapause for months and maybe years to survive bad weather.

**FOOD HABITS:** The host plants for the caterpillars are rabbit brush (*Chrysothamnus viscidiflorus*) and asters (*Machaeranthera canescens*, *M. viscosa*) suspected. The caterpillars eat leaves and flowers and feed together in groups. Adults feed on flower nectar.

**HABITAT:** Sagebrush, less often other dry shrublands or woodlands, often stream beds and dry washes. Also, arid grassland gulches, pinyon-juniper woodlands, sagebrush hills and canyons. The Sagebrush Checkerspot generally inhabits pinyon-juniper habitats that are rich in both sagebrush and rabbit brush, but a few colonies have been discovered in open sageland.

**ELEVATION:**

**PLANT COMMUNITY:** Generally inhabits pinyon-juniper woodlands.

**POPULATION TRENDS:** Unknown.

### **SPECIES PROTECTION AND CONSERVATION**

**ENDANGERED SPECIES ACT STATUS:** None (USDI, FWS 1996)  
[C2 (USDI, FWS 1994)]

**STATE STATUS:** None

**OTHER STATUS:** None

**MANAGEMENT FACTORS:****PROTECTIVE MEASURES TAKEN:****SUGGESTED PROJECTS:****LAND MANAGEMENT/OWNERSHIP:****SOURCES OF FURTHER INFORMATION****REFERENCES:**

BISON, Biota Information System of New Mexico, New Mexico Game and Fish Department.

Available at [http://www.cnr.vt.edu/fishex/nmex\\_main/species/215305.htm](http://www.cnr.vt.edu/fishex/nmex_main/species/215305.htm)

Corel, Opler, P. Available at

<http://www.npwrc.usgs.gov/resource/distr/lepid/byflyusa/usa/149.htm>.

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<http://imnh.isu.edu/digitalatlas/bio/insects/butrfly/famnymph/chac.htm>.

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NatureServe Explorer: An online encyclopedia of life [web application]. 2001. Version 1.6. Arlington, Virginia, USA: NatureServe. Available: <http://www.natureserve.org/explorer>. (Accessed: July 17, 2002).

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USDI, Fish and Wildlife Service. 1994. Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species, Proposed Rule. Federal Register 59(219): 59019.

USDI, Fish and Wildlife Service. 1996. Endangered and Threatened Wildlife and Plants; Review of Plant and Animal Taxa that are Candidates for Listing as Endangered or Threatened Species. Federal Register 61(40): 7596-7613.

West, L. Available at

<http://www.enature.com/fieldguide/showSpeciesSH.asp?curGroupID=2&shapeID=975&curPageNum=2&recnum=BU035>.

**MAJOR KNOWLEDGEABLE INDIVIDUALS:****ADDITIONAL INFORMATION:**

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